

Patent Claims:

1-12 (canceled)

13. (new) An eddy current measuring device, comprising:  
a flexible base;  
a first electrical component connected to the flexible base;  
a second electrical component connected to the flexible base, the first and second electrical components and the flexible base being collectively sufficiently flexible such that they can be matched to different radii of curvature of a turbine component; and  
a flexible rear key that at least partially covers the first and second electrical components adapted for ferromagnetic signal amplification.

14. (new) The device as claimed in claim 13, wherein the flexible base is a flexible sheet.

15. (new) The device as claimed in claim 14, wherein the sheet is formed from polyimide.

16. (new) The device as claimed in claim 13, wherein at least one coil is connected to the flexible base as an electrical component and is a copper coil.

17. (new) The device as claimed in claim 13, wherein the flexible rear key is formed by a polymer sheet filled with ferrite.

18. (new) The device as claimed in claim 13, wherein the flexible rear key is formed by a flexible metal sheet composed of a ferrite material.

19. (new) The device as claimed in claim 13, wherein the flexible rear key is formed by a plastically deformable encapsulation compound, in particular filled with ferrite particles.

20. (new) The device as claimed in claim 13, wherein the device has at least one coil as an electrical component, that is arranged in a planar manner on the flexible base.

21. (new) The device as claimed in claim 13, wherein the device has

ferromagnetic signal amplification.

22. (new) The probe as claimed in claim 13, wherein the probe can be matched to radii of curvature of at least 50 mm.

23. (new) An eddy current measuring device, comprising:

a flexible eddy current measuring device, comprising:

a flexible base;

a first electrical component connected to the flexible base;

a second electrical component connected to the flexible base, the first and second electrical components and the flexible base being collectively sufficiently flexible such that they can be matched to different radii of curvature of a turbine component; and

a flexible curable encapsulation element attached to at least one electrical component, and having a geometric surface similar to a curved surface of a turbine component, and cured to geometrically conform to the curved surface.

24. (new) The device as claimed in claim 23, wherein the flexible base is a flexible sheet.

25. (new) The device as claimed in claim 24, wherein the sheet is formed from polyimide.

26. (new) The device as claimed in claim 23, wherein at least one coil is connected to the flexible base as an electrical component and is a copper coil.

27. (new) The device as claimed in claim 13, wherein the device has ferromagnetic signal amplification.